MEGABLAST 1.2.3-Paracel [2001-11-20]
Reference:
Zheng Zhang, Scott Schwartz, Lukas Wagner, and Webb Miller (2000),
"A greedy algorithm for aligning DNA sequences",
J Comput Biol 2000; 7(1-2):203-14.
Database: Homo_sapiens.latestgp.masked.fa
          44,521 sequences; 200,768,834,160 total letters
Query= seqid23
        (3660 letters)

```
                                                        Score      E
Sequences producing significant alignments:            (bits)   Value

AC007600.5.1.183083                                      505    e-140
AC096996.1.1.194627                                      454    e-124
```

>AC007600.5.1.183083
            Length = 183083

 Score = 505 bits (255), Expect = e-140
 Identities = 255/255 (100%)
 Strand = Plus / Plus

```
Query: 1355  agaagttttttcctccaggagagccctgttttctatgtccagacattacaagaccccagca 1414
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 46566 agaagttttttcctccaggagagccctgttttctatgtccagacattacaagaccccagca 46625


Query: 1415  aagctctggtctttgaggaggccaccttgtcatggcaacagacctgtcccgggatcgtca 1474
             |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 46626 aagctctggtctttgaggaggccaccttgtcatggcaacagacctgtcccgggatcgtca 46685


Query: 1475  atggggcactggagctggagaggaacgggcatgcttctgaggggatgaccaggcctagag 1534
             |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 46686 atggggcactggagctggagaggaacgggcatgcttctgaggggatgaccaggcctagag 46745


Query: 1535  atgccctcgggccagaggaagaagggaacagcctgggcccagagttgcacaagatcaacc 1594
             |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 46746 atgccctcgggccagaggaagaagggaacagcctgggcccagagttgcacaagatcaacc 46805


Query: 1595  tggtggtgtccaagg 1609
             |||||||||||||||
Sbjct: 46806 tggtggtgtccaagg 46820
```

 Score = 458 bits (231), Expect = e-125
 Identities = 234/235 (99%)
 Strand = Plus / Plus

```
Query: 544  atattgattataccaaagatcctggaatattcagaagagcagttggggaatgttgtccat 603
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 34936 atattgattataccaaagatcctggaatattcagaagagcagttggggaatgttgtccat 34995


Query: 604  ggagtgggactctgctttgccctttttctctccgaatgtgtgaagtctctgagtttctcc 663
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
```

```
Sbjct: 34996  ggagtgggactctgctttgcccttttttctctccgaatgtgtgaagtctctgagtttctcc 35055


Query: 664    tccagttggatcatcaaccaacgcacagccatcaggttccaagcagctgtttcctcccttt 723
              ||||||||||||||||||||||||||||||||||||||||||| | |||||||||||||||
Sbjct: 35056  tccagttggatcatcaaccaacgcacagccatcaggttccgagcagctgtttcctcccttt 35115


Query: 724    gcctttgagaagctcatccaatttaagtctgtaatacacatcacctcaggagagg 778
              |||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 35116  gcctttgagaagctcatccaatttaagtctgtaatacacatcacctcaggagagg 35170




  Score =  454 bits (229), Expect = e-124
  Identities = 229/229 (100%)
  Strand = Plus / Plus


Query: 2217   ggttttccgctgccccatgagtttctttgacaccatcccaataggccggcttttgaactg 2276
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 70337  ggttttccgctgccccatgagtttctttgacaccatcccaataggccggcttttgaactg 70396


Query: 2277   cttcgcaggggacttggaacagctggaccagctcttgcccatcttttcagagcagttcct 2336
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 70397  cttcgcaggggacttggaacagctggaccagctcttgcccatcttttcagagcagttcct 70456


Query: 2337   ggtcctgtccttaatggtgatcgccgtcctgttgattgtcagtgtgctgtctccatatat 2396
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 70457  ggtcctgtccttaatggtgatcgccgtcctgttgattgtcagtgtgctgtctccatatat 70516


Query: 2397   cctgttaatgggagccataatcatggttatttgcttcatttattatatg 2445
              |||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 70517  cctgttaatgggagccataatcatggttatttgcttcatttattatatg 70565




  Score =  408 bits (206), Expect = e-110
  Identities = 206/206 (100%)
  Strand = Plus / Plus


Query: 1877   agattggagagcggggcctcaacctctctggggggcagaaacagaggatcagcctggccc 1936
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 57285  agattggagagcggggcctcaacctctctggggggcagaaacagaggatcagcctggccc 57344


Query: 1937   gcgccgtctattccgaccgtcagatctacctgctggacgaccccctgtctgctgtggacg 1996
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 57345  gcgccgtctattccgaccgtcagatctacctgctggacgaccccctgtctgctgtggacg 57404


Query: 1997   cccacgtggggaagcacattttgaggagtgcattaagaagacactcaggggaagacgg 2056
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 57405  cccacgtggggaagcacattttgaggagtgcattaagaagacactcaggggaagacgg 57464


Query: 2057   tcgtcctggtgacccaccagctgcag 2082
              ||||||||||||||||||||||||||
Sbjct: 57465  tcgtcctggtgacccaccagctgcag 57490




  Score =  385 bits (194), Expect = e-103
  Identities = 194/194 (100%)
```

Query: 2857 aagatgtgtgtctcggaagctcctttacacatggaaggcacaagttgtccccagggggtgg 2916
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 80649 aagatgtgtgtctcggaagctcctttacacatggaaggcacaagttgtccccagggggtgg 80708

Query: 2917 ccacagcatggggaaatcatatttcaggattatcacatgaaatacagagacaacacaccc 2976
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 80709 ccacagcatggggaaatcatatttcaggattatcacatgaaatacagagacaacacaccc 80768

Query: 2977 accgtgcttcacggcatcaacctgaccatccgcggccacgaagtggtgggcatcgtggga 3036
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 80769 accgtgcttcacggcatcaacctgaccatccgcggccacgaagtggtgggcatcgtggga 80828

Query: 3037 aggacgggctctgg 3050
             ||||||||||||||
Sbjct: 80829 aggacgggctctgg 80842

Score = 371 bits (187), Expect = 2e-99
Identities = 187/187 (100%)
Strand = Plus / Plus

Query: 2583 gtttaagaggctgactgatgcgcagaataactacctgctgttgtttctatcttccacacg 2642
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 73139 gtttaagaggctgactgatgcgcagaataactacctgctgttgtttctatcttccacacg 73198

Query: 2643 atggatggcattgaggctggagatcatgaccaaccttgtgaccttggctgttgccctgtt 2702
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 73199 atggatggcattgaggctggagatcatgaccaaccttgtgaccttggctgttgccctgtt 73258

Query: 2703 cgtggcttttggcatttcctccaccccctactcctttaaagtcatggctgtcaacatcgt 2762
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 73259 cgtggcttttggcatttcctccaccccctactcctttaaagtcatggctgtcaacatcgt 73318

Query: 2763 gctgcag 2769
             |||||||
Sbjct: 73319 gctgcag 73325

Score = 347 bits (175), Expect = 3e-92
Identities = 178/179 (99%)
Strand = Plus / Plus

Query: 776   aggccatcagcttcttcaccggtgatgtaaactacctgtttgaaggggtgtgctatggac 835
             |||||.||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 41478 aggccatcagcttcttcaccggtgatgtaaactacctgtttgaaggggtgtgctatggac 41537

Query: 836   ccctagtactgatcacctgcgcatcgctggtcatctgcagcatttcttcctacttcatta 895
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 41538 ccctagtactgatcacctgcgcatcgctggtcatctgcagcatttcttcctacttcatta 41597

Query: 896   ttggatacactgcatttattgccatcttatgctatctcctggttttcccactggaggta 954
             |||||||||||||||||||||||||||||||||||||||||||||||||||||||| ||||
Sbjct: 41598 ttggatacactgcatttattgccatcttatgctatctcctggttttcccactggcggta 41656

Score = 337 bits (170), Expect = 3e-89
Identities = 170/170 (100%)
Strand = Plus / Plus

Query: 3401   agatcatccttatcgatgaagccacagcctccattgacatggagacagacaccctgatcc 3460
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 90103 agatcatccttatcgatgaagccacagcctccattgacatggagacagacaccctgatcc 90162

Query: 3461   agcgcacaatccgtgaagccttccagggctgcaccgtgctcgtcattgcccaccgtgtca 3520
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 90163 agcgcacaatccgtgaagccttccagggctgcaccgtgctcgtcattgcccaccgtgtca 90222

Query: 3521   ccactgtgctgaactgtgaccacatcctggttatgggcaatgggaaggtg 3570
              ||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 90223 ccactgtgctgaactgtgaccacatcctggttatgggcaatgggaaggtg 90272

Score = 321 bits (162), Expect = 2e-84
Identities = 162/162 (100%)
Strand = Plus / Plus

Query: 235   aggtttcctgccccccagcccctggacaatgctggcctgttctcctacctcaccgtgtca 294
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 29801 aggtttcctgccccccagcccctggacaatgctggcctgttctcctacctcaccgtgtca 29860

Query: 295   tggctcaccccgctcatgatccaaagcttacggagtcgcttagatgagaacaccatccct 354
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 29861 tggctcaccccgctcatgatccaaagcttacggagtcgcttagatgagaacaccatccct 29920

Query: 355   ccactgtcagtccatgatgcctcagacaaaaatgtccaaagg 396
              ||||||||||||||||||||||||||||||||||||||||||
Sbjct: 29921 ccactgtcagtccatgatgcctcagacaaaaatgtccaaagg 29962

Score = 319 bits (161), Expect = 7e-84
Identities = 161/161 (100%)
Strand = Plus / Plus

Query: 3049   gggaagtcctccttgggcatggctctcttccgcctggtggagcccatggcaggccggatt 3108
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 82347 gggaagtcctccttgggcatggctctcttccgcctggtggagcccatggcaggccggatt 82406

Query: 3109   ctcattgacggcgtggacatttgcagcatcggcctggaggacttgcggtccaagctctca 3168
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 82407 ctcattgacggcgtggacatttgcagcatcggcctggaggacttgcggtccaagctctca 82466

Query: 3169   gtgatccctcaagatccagtgctgctctcaggaaccatcag 3209
              |||||||||||||||||||||||||||||||||||||||||
Sbjct: 82467 gtgatccctcaagatccagtgctgctctcaggaaccatcag 82507

Score = 299 bits (151), Expect = 6e-78
Identities = 151/151 (100%)

Query: 393   aaggcttcaccgcctttgggaagaagaagtctcaaggcgagggattgaaaaagcttcagt 452
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 33335 aaggcttcaccgcctttgggaagaagaagtctcaaggcgagggattgaaaaagcttcagt 33394

Query: 453   gcttctggtgatgctgaggttccagagaacaaggttgattttcgatgcacttctgggcat 512
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 33395 gcttctggtgatgctgaggttccagagaacaaggttgattttcgatgcacttctgggcat 33454

Query: 513   ctgcttctgcattgccagtgtactcgggcca 543
              |||||||||||||||||||||||||||||||
Sbjct: 33455 ctgcttctgcattgccagtgtactcgggcca 33485

 Score = 297 bits (150), Expect = 3e-77
 Identities = 150/150 (100%)
 Strand = Plus / Plus

Query: 950   aggtattcatgacaagaatggctgtgaaggctcagcatcacacatctgaggtcagcgacc 1009
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 42421 aggtattcatgacaagaatggctgtgaaggctcagcatcacacatctgaggtcagcgacc 42480

Query: 1010   agcgcatccgtgtgaccagtgaagttctcacttgcattaagctgattaaaatgtacacat 1069
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 42481 agcgcatccgtgtgaccagtgaagttctcacttgcattaagctgattaaaatgtacacat 42540

Query: 1070   gggagaaaccatttgcaaaaatcattgaag 1099
              ||||||||||||||||||||||||||||||
Sbjct: 42541 gggagaaaccatttgcaaaaatcattgaag 42570

 Score = 293 bits (148), Expect = 4e-76
 Identities = 151/152 (99%)
 Strand = Plus / Plus

Query: 1098   agacctaagaaggaaggaaaggaagctattggagaagtgcgggcttgtccagagcctgac 1157
              |||||||||||||||||||||||| |||||||||||||||||||||||||||||||||||
Sbjct: 42736 agacctaagaaggaaggaaaggaaactattggagaagtgcgggcttgtccagagcctgac 42795

Query: 1158   aagtataaccttgttcatcatccccacagtggccacagcggtctgggttctcatccacac 1217
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 42796 aagtataaccttgttcatcatccccacagtggccacagcggtctgggttctcatccacac 42855

Query: 1218   atccttaaagctgaaactcacagcgtcaatgg 1249
              ||||||||||||||||||||||||||||||||
Sbjct: 42856 atccttaaagctgaaactcacagcgtcaatgg 42887

 Score = 289 bits (146), Expect = 6e-75
 Identities = 188/202 (93%)
 Strand = Plus / Plus

Query: 1877   agattggagagcggggcctcaacctctctggggggcagaaacagaggatcagcctggccc 1936
              ||||||| ||||||||||||||||||||||||||||||||| ||||||| ||||||||||

```
Sbjct: 142145 agattggggagcggggcctcaacctctctggggggcagaggcagaggattagcctggccc 142204


Query: 1937   gcgccgtctattccgaccgtcagatctacctgctggacgaccccctgtctgctgtggacg 1996
               |||| ||||| ||||||||||||||| |||||||||||||||||||||||| || ||||||||
Sbjct: 142205 gcgctgtctactccgaccgtcagctctacctgctggacgacccctgtcggccgtggacg 142264


Query: 1997   cccacgtggggaagcacattttgaggagtgcattaagaagacactcaggggaagacgg 2056
               ||||||||||||||||| | ||||||||||||||||||||| ||||||| |||||| |
Sbjct: 142265 cccacgtggggaagcacgtctttgaggagtgcattaagaagacgctcaggggaaagacag 142324


Query: 2057   tcgtcctggtgacccaccagct 2078
               ||||||||||||||||||||||
Sbjct: 142325 tcgtcctggtgacccaccagct 142346



   Score =  278 bits (140), Expect = 2e-71
   Identities = 140/140 (100%)
   Strand = Plus / Plus


Query: 2445   gatgttcaagaaggccatcggtgtgttcaagagactggagaactatagccggtctccttt 2504
               ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 70675  gatgttcaagaaggccatcggtgtgttcaagagactggagaactatagccggtctccttt 70734


Query: 2505   attctcccacatcctcaattctctgcaaggcctgagctccatccatgtctatggaaaaac 2564
               ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 70735  attctcccacatcctcaattctctgcaaggcctgagctccatccatgtctatggaaaaac 70794


Query: 2565   tgaagacttcatcagccagt 2584
               ||||||||||||||||||||
Sbjct: 70795  tgaagacttcatcagccagt 70814



   Score =  278 bits (140), Expect = 2e-71
   Identities = 140/140 (100%)
   Strand = Plus / Plus


Query: 2080   cagtacttagaattttgtggccagatcattttgttggaaaatgggaaaatctgtgaaaat 2139
               ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 59486  cagtacttagaattttgtggccagatcattttgttggaaaatgggaaaatctgtgaaaat 59545


Query: 2140.  ggaactcacagtgagttaatgcagaaaaaggggaaatatgcccaacttatccagaagatg 2199
               ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 59546  ggaactcacagtgagttaatgcagaaaaaggggaaatatgcccaacttatccagaagatg 59605


Query: 2200   cacaaggaagccacttcggt 2219
               ||||||||||||||||||||
Sbjct: 59606  cacaaggaagccacttcggt 59625



   Score =  276 bits (139), Expect = 9e-71
   Identities = 139/139 (100%)
   Strand = Plus / Plus


Query: 100    aaaacctatactctccaagatggcccctggagtcagcaagagagaaatcctgaggctcca 159
               ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
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```
Sbjct: 27194 aaaacctatactctccaagatggcccctggagtcagcaagagagaaatcctgaggctcca 27253


Query: 160    gggagggcagctgtcccaccgtgggggaagtatgatgctgccttgagaaccatgattccc 219
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 27254 gggagggcagctgtcccaccgtgggggaagtatgatgctgccttgagaaccatgattccc 27313


Query: 220    ttccgtcccaagccgaggt 238
              |||||||||||||||||||
Sbjct: 27314 ttccgtcccaagccgaggt 27332



 Score =  252 bits (127), Expect = 1e-63
 Identities = 127/127 (100%)
 Strand = Plus / Plus


Query: 1679   agatgcacttgctcgagggctcggtggggggtgcagggaagcctggcctatgtcccccagc 1738
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 52228  agatgcacttgctcgagggctcggtggggggtgcagggaagcctggcctatgtcccccagc 52287


Query: 1739   aggcctggatcgtcagcgggaacatcagggagaacatcctcatgggaggcgcatatgaca 1798
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 52288  aggcctggatcgtcagcgggaacatcagggagaacatcctcatgggaggcgcatatgaca 52347


Query: 1799   aggcccg 1805
              |||||||
Sbjct: 52348  aggcccg 52354



 Score =  226 bits (114), Expect = 8e-56
 Identities = 114/114 (100%)
 Strand = Plus / Plus


Query: 3289   atctcaaagttccccaaaaagctgcatacagatgtggtggaaaacggtggaaacttctct 3348
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 87547  atctcaaagttccccaaaaagctgcatacagatgtggtggaaaacggtggaaacttctct 87606


Query: 3349   gtgggggagaggcagctgctctgcattgccagggctgtgcttcgcaactccaag 3402
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 87607  gtgggggagaggcagctgctctgcattgccagggctgtgcttcgcaactccaag 87660



 Score =  216 bits (109), Expect = 7e-53
 Identities = 109/109 (100%)
 Strand = Plus / Plus


Query: 1248   ggccttcagcatgctggcctccttgaatctccttcggctgtcagtgttctttgtgcctat 1307
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 44216  ggccttcagcatgctggcctccttgaatctccttcggctgtcagtgttctttgtgcctat 44275


Query: 1308   tgcagtcaaaggtctcacgaattccaagtctgcagtgatgaggttcaag 1356
              |||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 44276  tgcagtcaaaggtctcacgaattccaagtctgcagtgatgaggttcaag 44324



 Score =  196 bits (99), Expect = 7e-47
```

Identities = 99/99 (100%)
Strand = Plus / Plus

Query: 1   atgactaggaagaggacatactgggtgcccaactcttctggtggcctcgtgaatcgtggc 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 25846 atgactaggaagaggacatactgggtgcccaactcttctggtggcctcgtgaatcgtggc 25905

Query: 61   atcgacataggcgatgacatggtttcaggacttatttat 99
              |||||||||||||||||||||||||||||||||||||||
Sbjct: 25906 atcgacataggcgatgacatggtttcaggacttatttat 25944

 Score = 188 bits (95), Expect = 2e-44
 Identities = 95/95 (100%)
 Strand = Plus / Plus

Query: 3566   aggtggtagaatttgatcggccggaggtactgcggaagaagcctgggtcattgttcgcag 3625
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 90397 aggtggtagaatttgatcggccggaggtactgcggaagaagcctgggtcattgttcgcag 90456

Query: 3626   ccctcatggccacagccacttcttcactgagataa 3660
              |||||||||||||||||||||||||||||||||||
Sbjct: 90457 ccctcatggccacagccacttcttcactgagataa 90491

 Score = 182 bits (92), Expect = 1e-42
 Identities = 92/92 (100%)
 Strand = Plus / Plus

Query: 2768   agctggcgtccagcttccaggccactgcccggattggcttggagacagaggcacagttca 2827
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 79077 agctggcgtccagcttccaggccactgcccggattggcttggagacagaggcacagttca 79136

Query: 2828   cggctgtagagaggatactgcagtacatgaag 2859
              ||||||||||||||||||||||||||||||||
Sbjct: 79137 cggctgtagagaggatactgcagtacatgaag 79168

 Score = 161 bits (81), Expect = 4e-36
 Identities = 81/81 (100%)
 Strand = Plus / Plus

Query: 3208   agattcaacctagatccctttgaccgtcacactgaccagcagatctgggatgccttggag 3267
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 86796 agattcaacctagatccctttgaccgtcacactgaccagcagatctgggatgccttggag 86855

Query: 3268   aggacattcctgaccaaggcc 3288
              |||||||||||||||||||||
Sbjct: 86856 aggacattcctgaccaaggcc 86876

 Score = 147 bits (74), Expect = 6e-32
 Identities = 74/74 (100%)
 Strand = Plus / Plus

```
Query: 1805   gataccteccaggtgctccactgctgctccctgaatcgggacctggaacttctgcccttg 1864
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 54466  gataccteccaggtgctccactgctgctccctgaatcgggacctggaacttctgcccttg 54525


Query: 1865   gagacatgacagag 1878
              ||||||||||||||
Sbjct: 54526  gagacatgacagag 54539



 Score =  147 bits (74), Expect = 6e-32
 Identities = 74/74 (100%)
 Strand = Plus / Plus


Query: 1607   aggggatgatgttaggggtctgcggcaacacggggagtggtaagagcagcctgttgtcag 1666
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 49269  aggggatgatgttaggggtctgcggcaacacggggagtggtaagagcagcctgttgtcag 49328


Query: 1667   ccatcctggaggag 1680
              ||||||||||||||
Sbjct: 49329  ccatcctggaggag 49342



>AC096996.1.1.194627
         Length = 194627

 Score =  454 bits (229), Expect = e-124
 Identities = 229/229 (100%)
 Strand = Plus / Minus


Query: 2217   ggttttccgctgccccatgagtttctttgacaccatcccaataggccggcttttgaactg 2276
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 173330 ggttttccgctgccccatgagtttctttgacaccatcccaataggccggcttttgaactg 173271


Query: 2277   cttcgcaggggacttggaacagctggaccagctcttgcccatcttttcagagcagttcct 2336
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 173270 cttcgcaggggacttggaacagctggaccagctcttgcccatcttttcagagcagttcct 173211


Query: 2337   ggtcctgtccttaatggtgatcgccgtcctgttgattgtcagtgtgctgtctccatatat 2396
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 173210 ggtcctgtccttaatggtgatcgccgtcctgttgattgtcagtgtgctgtctccatatat 173151


Query: 2397   cctgttaatgggagccataatcatggttatttgcttcatttattatatg 2445
              |||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 173150 cctgttaatgggagccataatcatggttatttgcttcatttattatatg 173102



 Score =  408 bits (206), Expect = e-110
 Identities = 206/206 (100%)
 Strand = Plus / Minus


Query: 1877   agattggagagcggggcctcaacctctctggggggcagaaacagaggatcagcctggccc 1936
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 186382 agattggagagcggggcctcaacctctctggggggcagaaacagaggatcagcctggccc 186323


Query: 1937   gcgccgtctattccgaccgtcagatctacctgctggacgacccctgtctgctgtggacg 1996
              |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
```

```
Sbjct: 186322 gcgccgtctattccgaccgtcagatctacctgctggacgaccccctgtctgctgtggacg 186263


Query: 1997   cccacgtggggaagcacattttgaggagtgcattaagaagacactcagggggaagacgg 2056
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 186262 cccacgtggggaagcacattttgaggagtgcattaagaagacactcagggggaagacgg 186203


Query: 2057   tcgtcctggtgacccaccagctgcag 2082
              ||||||||||||||||||||||||||
Sbjct: 186202 tcgtcctggtgacccaccagctgcag 186177



 Score =  385 bits (194), Expect = e-103
 Identities = 194/194 (100%)
 Strand = Plus / Minus


Query: 2857   aagatgtgtgtctcggaagctcctttacacatggaaggcacaagttgtccccagggggtgg 2916
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 163018 aagatgtgtgtctcggaagctcctttacacatggaaggcacaagttgtccccagggggtgg 162959


Query: 2917   ccacagcatggggaaatcatatttcaggattatcacatgaaatacagagacaacacaccc 2976
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 162958 ccacagcatggggaaatcatatttcaggattatcacatgaaatacagagacaacacaccc 162899


Query: 2977   accgtgcttcacggcatcaacctgaccatccgcggccacgaagtggtgggcatcgtggga 3036
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 162898 accgtgcttcacggcatcaacctgaccatccgcggccacgaagtggtgggcatcgtggga 162839


Query: 3037   aggacgggctctgg 3050
              ||||||||||||||
Sbjct: 162838 aggacgggctctgg 162825



 Score =  371 bits (187), Expect = 2e-99
 Identities = 187/187 (100%)
 Strand = Plus / Minus


Query: 2583   gtttaagaggctgactgatgcgcagaataactacctgctgttgtttctatcttccacacg 2642
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 170528 gtttaagaggctgactgatgcgcagaataactacctgctgttgtttctatcttccacacg 170469


Query: 2643   atggatggcattgaggctggagatcatgaccaaccttgtgaccttggctgttgccctgtt 2702
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 170468 atggatggcattgaggctggagatcatgaccaaccttgtgaccttggctgttgccctgtt 170409


Query: 2703   cgtggctttggcatttcctccacccctactcctttaaagtcatggctgtcaacatcgt 2762
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 170408 cgtggctttggcatttcctccacccctactcctttaaagtcatggctgtcaacatcgt 170349


Query: 2763   gctgcag 2769
              |||||||
Sbjct: 170348 gctgcag 170342



 Score =  337 bits (170), Expect = 3e-89
 Identities = 170/170 (100%)
```

```
Query:  3401  agatcatccttatcgatgaagccacagcctccattgacatggagacagacaccctgatcc 3460
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 153564 agatcatccttatcgatgaagccacagcctccattgacatggagacagacaccctgatcc 153505


Query:  3461  agcgcacaatccgtgaagccttccagggctgcaccgtgctcgtcattgcccaccgtgtca 3520
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 153504 agcgcacaatccgtgaagccttccagggctgcaccgtgctcgtcattgcccaccgtgtca 153445


Query:  3521  ccactgtgctgaactgtgaccacatcctggttatgggcaatgggaaggtg 3570
              ||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 153444 ccactgtgctgaactgtgaccacatcctggttatgggcaatgggaaggtg 153395
```


 Score =   319 bits (161), Expect = 7e-84
 Identities = 161/161 (100%)
 Strand = Plus / Minus


```
Query:  3049  gggaagtcctccttgggcatggctctcttccgcctggtggagcccatggcaggccggatt 3108
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 161320 gggaagtcctccttgggcatggctctcttccgcctggtggagcccatggcaggccggatt 161261


Query:  3109  ctcattgacggcgtggacatttgcagcatcggcctggaggacttgcggtccaagctctca 3168
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 161260 ctcattgacggcgtggacatttgcagcatcggcctggaggacttgcggtccaagctctca 161201


Query:  3169  gtgatccctcaagatccagtgctgctctcaggaaccatcag 3209
              |||||||||||||||||||||||||||||||||||||||||
Sbjct: 161200 gtgatccctcaagatccagtgctgctctcaggaaccatcag 161160
```


 Score =   289 bits (146), Expect = 6e-75
 Identities = 188/202 (93%)
 Strand = Plus / Minus


```
Query:  1877  agattggagagcggggcctcaacctctctggggggcagaaacagaggatcagcctggccc 1936
              ||||||| |||||||||||||||||||||||||||||||||    ||||||||| |||||||||||||
Sbjct: 101522 agattggggagcggggcctcaacctctctggggggcagaggcagaggattagcctggccc 101463


Query:  1937  gcgccgtctattccgaccgtcagatctacctgctggacgaccccctgtctgctgtggacg 1996
              |||| ||||| ||||||||||||| |||||||||||||||||||||||||| || ||||||
Sbjct: 101462 gcgctgtctactccgaccgtcagctctacctgctggacgacccccctgtcggccgtggacg 101403


Query:  1997  cccacgtggggaagcacatttttgaggagtgcattaagaagacactcaggggggaagacgg 2056
              |||||||||||||||| | ||||||||||||||||||||||||| ||||||||| ||||| |
Sbjct: 101402 cccacgtggggaagcacgtctttgaggagtgcattaagaagacgctcaggggaaagacag 101343


Query:  2057  tcgtcctggtgacccaccagct 2078
              ||||||||||||||||||||||
Sbjct: 101342 tcgtcctggtgacccaccagct 101321
```


 Score =   278 bits (140), Expect = 2e-71
 Identities = 140/140 (100%)

Query: 2080   cagtacttagaattttgtggccagatcattttgttggaaaatgggaaaatctgtgaaaat 2139
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 184181 cagtacttagaattttgtggccagatcattttgttggaaaatgggaaaatctgtgaaaat 184122

Query: 2140   ggaactcacagtgagttaatgcagaaaaaggggaaatatgcccaacttatccagaagatg 2199
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 184121 ggaactcacagtgagttaatgcagaaaaaggggaaatatgcccaacttatccagaagatg 184062

Query: 2200   cacaaggaagccacttcggt 2219
              ||||||||||||||||||||
Sbjct: 184061 cacaaggaagccacttcggt 184042

 Score = 278 bits (140), Expect = 2e-71
 Identities = 140/140 (100%)
 Strand = Plus / Minus

Query: 2445   gatgttcaagaaggccatcggtgtgttcaagagactggagaactatagccggtctccttt 2504
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 172992 gatgttcaagaaggccatcggtgtgttcaagagactggagaactatagccggtctccttt 172933

Query: 2505   attctcccacatcctcaattctctgcaaggcctgagctccatccatgtctatggaaaaac 2564
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 172932 attctcccacatcctcaattctctgcaaggcctgagctccatccatgtctatggaaaaac 172873

Query: 2565   tgaagacttcatcagccagt 2584
              ||||||||||||||||||||
Sbjct: 172872 tgaagacttcatcagccagt 172853

 Score = 252 bits (127), Expect = 1e-63
 Identities = 127/127 (100%)
 Strand = Plus / Minus

Query: 1679   agatgcacttgctcgagggctcggtggggggtgcagggaagcctggcctatgtcccccagc 1738
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 191439 agatgcacttgctcgagggctcggtggggggtgcagggaagcctggcctatgtcccccagc 191380

Query: 1739   aggcctggatcgtcagcgggaacatcagggagaacatcctcatgggaggcgcatatgaca 1798
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 191379 aggcctggatcgtcagcgggaacatcagggagaacatcctcatgggaggcgcatatgaca 191320

Query: 1799   aggcccg 1805
              |||||||
Sbjct: 191319 aggcccg 191313

 Score = 226 bits (114), Expect = 8e-56
 Identities = 114/114 (100%)
 Strand = Plus / Minus

Query: 3289   atctcaaagttccccaaaaagctgcatacagatgtggtggaaaacggtggaaacttctct 3348
              ||||||||||||||||||||||||||||.|||||||||||||||||||||||||||||||

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Sbjct:  156120  atctcaaagttccccaaaaagctgcatacagatgtggtggaaaacggtggaaacttctct  156061


Query:  3349    gtggggggagaggcagctgctctgcattgccagggctgtgcttcgcaactccaag  3402
                ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct:  156060  gtggggggagaggcagctgctctgcattgccagggctgtgcttcgcaactccaag  156007



 Score =  188 bits (95), Expect = 2e-44
 Identities = 95/95 (100%)
 Strand = Plus / Minus


Query:  3566    aggtggtagaatttgatcggccggaggtactgcggaagaagcctgggtcattgttcgcag  3625
                ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct:  153270  aggtggtagaatttgatcggccggaggtactgcggaagaagcctgggtcattgttcgcag  153211


Query:  3626    ccctcatggccacagccacttcttcactgagataa  3660
                |||||||||||||||||||||||||||||||||||
Sbjct:  153210  ccctcatggccacagccacttcttcactgagataa  153176



 Score =  182 bits (92), Expect = 1e-42
 Identities = 92/92 (100%)
 Strand = Plus / Minus


Query:  2768    agctggcgtccagcttccaggccactgcccggattggcttggagacagaggcacagttca  2827
                ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct:  164590  agctggcgtccagcttccaggccactgcccggattggcttggagacagaggcacagttca  164531


Query:  2828    cggctgtagagaggatactgcagtacatgaag  2859
                ||||||||||||||||||||||||||||||||
Sbjct:  164530  cggctgtagagaggatactgcagtacatgaag  164499



 Score =  161 bits (81), Expect = 4e-36
 Identities = 81/81 (100%)
 Strand = Plus / Minus


Query:  3208    agattcaacctagatccctttgaccgtcacactgaccagcagatctgggatgccttggag  3267
                ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct:  156871  agattcaacctagatccctttgaccgtcacactgaccagcagatctgggatgccttggag  156812


Query:  3268    aggacattcctgaccaaggcc  3288
                |||||||||||||||||||||
Sbjct:  156811  aggacattcctgaccaaggcc  156791



 Score =  147 bits (74), Expect = 6e-32
 Identities = 74/74 (100%)
 Strand = Plus / Minus


Query:  1805    gatacctccaggtgctccactgctgctccctgaatcgggacctggaacttctgccctttg  1864
                ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct:  189201  gatacctccaggtgctccactgctgctccctgaatcgggacctggaacttctgccctttg  189142


Query:  1865    gagacatgacagag  1878
```

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                        ||||||||||||||
Sbjct: 189141 gagacatgacagag 189128


     Score =  147 bits (74), Expect = 6e-32
     Identities = 74/74 (100%)
     Strand = Plus / Minus


Query: 1607    aggggatgatgttaggggtctgcggcaacacggggagtggtaagagcagcctgttgtcag 1666
               ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 194398 aggggatgatgttaggggtctgcggcaacacggggagtggtaagagcagcctgttgtcag 194339


Query: 1667    ccatcctggaggag 1680
               ||||||||||||||
Sbjct: 194338 ccatcctggaggag 194325
```